MATVEYEVA, F.A.; PLEKHANOVA, Ye.A.

Mineralogical characteristics of the raw material for aluminum silicate refractories of the Kuznetsk Metallurgical Plant. Trudy Khim.-met.inst.Sib.otd.AN SSSR no.17:47-59 '61.
(MIRA 15:8)
(Novokuznetsk--Refractory materials) (Clay--Analysis)

MATVEYEVA, F.A.; PLEKHANOVA, Ye.A.

Effect of iron oxide on the morphology of mullite. Trudy Khim.-met.inst.Sib.otd.AN SSSR no.17:11-15 '61. (MIRA 15:8)
(Mullite) (Iron oxides)

CHETVERIKOV, D.I.; PLEKHANOVA, Ye.A.

Technology of the preparation of raw wood tar for processing. Gidroliz. i lesokhim. prom. 17 no.4:25-27 '64 (MIRA 17:6)

1. TSentral'nyy nauchno-issledovatel'skiy lesokhimicheskiy institut.

L 46153-65

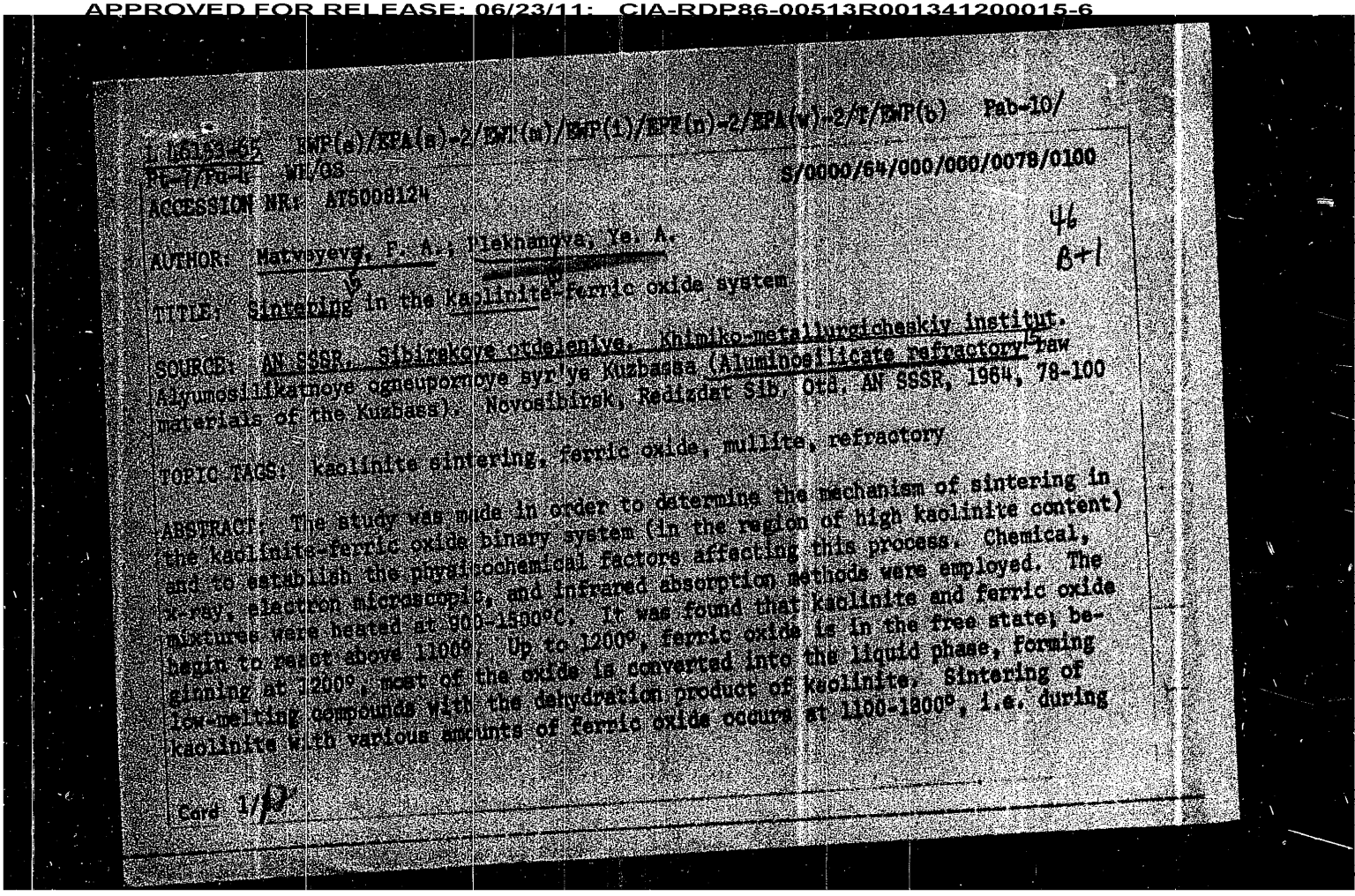
ACCESSION NR: AT5008124

the period of intensive mullite formation; mullite crystals grow during the sintering process. Thus, sinter in the kaolinite-ferric oxide system is due both to the presence of the liquid phase and to the recrystallization of mullite. Ferric oxide in amounts from 0.3 to 8.0% promotes the mullitization of kaolinite. A further rise in ferric oxide content decreases the yield of mullite because of the formation of the liquid phase and probably because of the decomposition of mullite by iron oxides. The results of the study indicate that the composition of mullite produced by heating refractory clays differs from α-mullite, which has the formula $3Al_2O_3 \cdot 2SiO_2$, since a solid solution of mullite and ferric oxide is formed. The presence of this solid solution is shown by an increase in the index of refraction as the ferric oxide content of the mixtures increases, and by the nature of the infrared absorption spectra. At 1400-1500°, ferric oxide partly decomposes the mullite. The limiting content of ferric oxide above which the refractoriness and slag resistance undergo a sharp decline is 5.0%. Orig. art. has: 9 figures and 11 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

Card 2/3



L 16123-65 EWP(e)/EPA(s)-2/EWT(m)/EWP(t)/EPF(n)-2/EPA(w)-2/T/EWP(b) Pab-10/
Pf-4/Pu-4 WW/GS S/0000/64/000/000/0078/0100
ACCESSION NR: AT5008124

AUTHOR: Matveyeva, F. A.; Plekhanova, Ye. A. 46
B+1

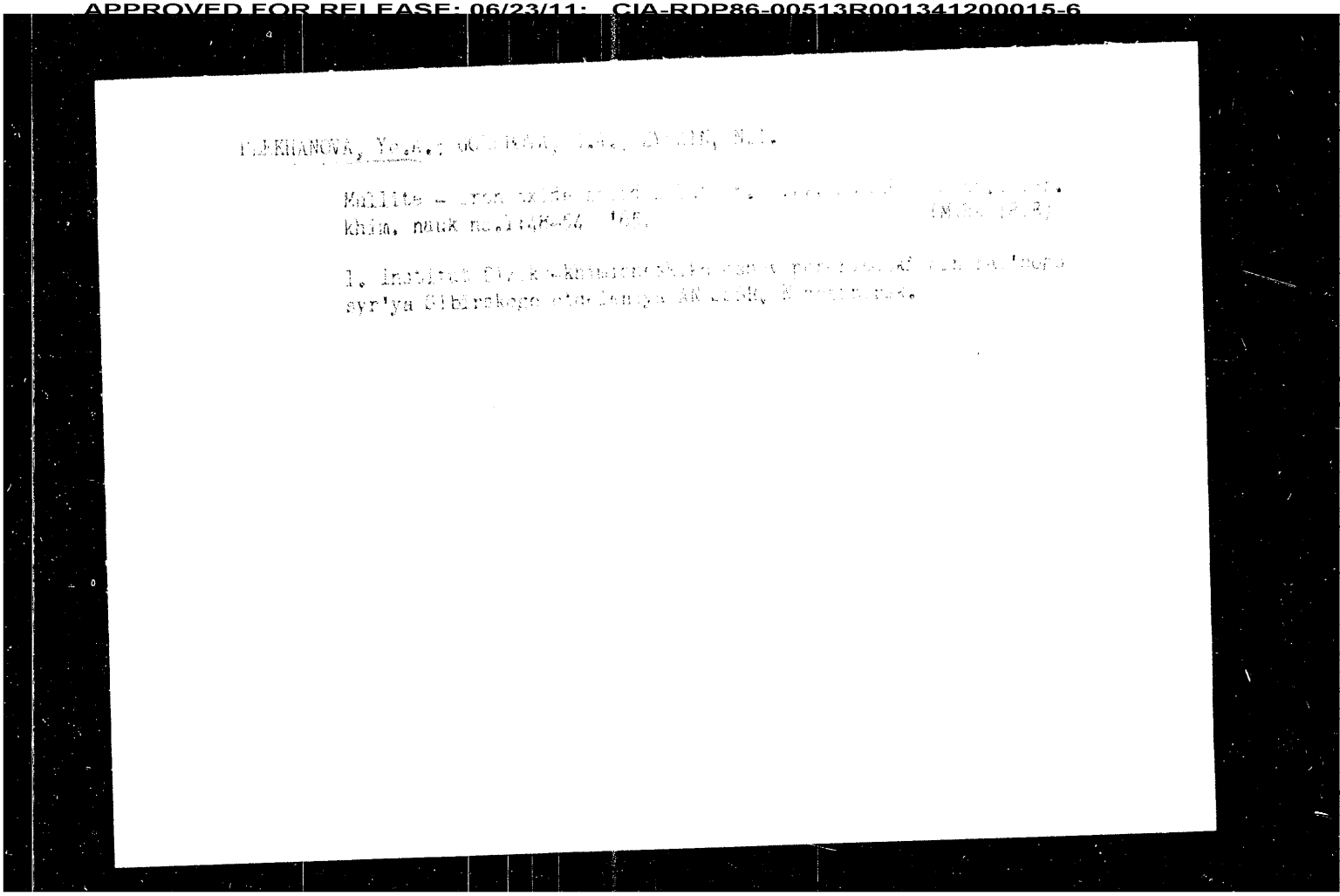
TITLE: Sintering in the kaolinite-ferric oxide system

SOURCE: AN SSSR. Sibirskoye otdeleniye. Khimiko-metallurgicheskiy institut. Alyumosilikatnoye ogneupornoye syr'ye Kuzbassa (Aluminosilicate refractory raw materials of the Kuzbass). Novosibirsk, Redizdat Sib. Otd. AN SSSR, 1964, 78-100

TOPIC TAGS: kaolinite sintering, ferric oxide, mullite, refractory

ABSTRACT: The study was made in order to determine the mechanism of sintering in the kaolinite-ferric oxide binary system (in the region of high kaolinite content) and to establish the physicochemical factors affecting this process. Chemical, x-ray, electron microscopic, and infrared absorption methods were employed. The mixtures were heated at 900-1500°C. It was found that kaolinite and ferric oxide begin to react above 1100°. Up to 1200°, ferric oxide is in the free state; beginning at 1200°, most of the oxide is converted into the liquid phase, forming low-melting compounds with the dehydration product of kaolinite. Sintering of kaolinite with various amounts of ferric oxide occurs at 1100-1300°, i.e. during

Card 1/2



USSR/Chemical Technology - Chemical Products and Their Application. Silicates. Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62314

Abstract: absorption of 4 to 6%. The tests showed that tiles made from Doroginsk clay, under operational conditions are stable or relatively stable on exposure to hot H_2SO_4 of 3-6% concentration and unstable in alkaline media and entirely unstable in 93% H_2SO_4 and 15% NaOH at 100°. Corrosion in caustic media under operational conditions occurs more rapidly than under laboratory conditions. The method specified in the standard (GOST 473-53) for determination of acid-stability of ceramic materials is very little reproducive of operational use of acid-resistant materials.

Card 2/2

PLEKHANOVA, YE. A.

USSR/Chemical Technology - Chemical Products and Their Application. Silicates. Glass. Ceramics. Binders. I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62314

Author: Matveyeva, F. A., Plekhanova, Ye. A.

Institution: None

Title: Concerning the Use of Acid-Resistant Tile Made from Clays of Doroginsk Deposit in Novosibirsk Oblast in the Chemical Industry

Original Periodical: Tr. khim.-metallurg. in-ta Zap. Sib. fil. AN SSSR, 1955, No 9, 37-49

Abstract: Presentation of the results of tests of chemical stability of ceramic tiles made from Doroginsk clay, under conditions of utilization at a coke and chemicals plant. The procedure of testing in production apparatus with exposure to various caustic media is described. Tests over prolonged periods were made of tiles made from Doroginsk clay having different density and water absorption of <2% and 2 to 4% and of tiles of the Khar'kov plant having a water

Card 1/2

PLEKHANOVA, YE. A.

USSR/Chemical Technology - Chemical Products and Their Application. Silicates. Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62313

Author: Matveyeva, F. A., Plekhanova, Ye. A.

Institution: None

Title: Chemical Stability of Ceramic Tiles Made from Clay of Doroginsk Deposit of Novosibirsk Oblast

Original Periodical: Tr. khim. metallurg. in-ta Zap. Sib. fil. AN SSSR, 1955, No 9, 19-36

Abstract: Presented are physicochemical characteristics (water absorption, acid resistance, thermal stability, chemical and mineralogical compositions) of tiles made from Doroginsk clay and fired at different temperatures. Data are given concerning laboratory investigations of corroding action of caustic media (H_2SO_4, HNO_3, HCl and NaOH) depending on concentration and duration of exposure by determining the extent of changes in chemical composition, acid-

Card 1/2

Card 2/2

Acid-Resistant Ceramics From Siberian Raw Material (Cont.)

Grain-size distribution (fraction units in mm)							
0.25	0.25-0.05	.0.05-.0.02	0.02-0.01	0.01-0.005	0.005-0.002	0.002-0.005	0.0005
0.3	0.08	13.30	12.85	19.41	16.21	19.72	18.13

Card 3/3

S. P. Sh.

Acid-Resistant Ceramics From Siberian Raw Material (Cont.)

add to the Doroginskoye clays refractory, slightly sintered, sufficiently plastic clays and feldspar as fluxing material; grog must also be added. The author recommends the following proportions for the paste (in percent): light-colored Dorogino clays, 35 to 45; refractory, sintered, sufficiently plastic clay, 25; feldspar, 10 to 15; admixture (grog from the Dorogino clays, porcelain rubble, etc.), 20 to 25. It is possible to obtain a variety of acid-resistant ceramic products from this combination.

Chemical composition						Fire-resistance °C
SiO_2	Al_2O_3	Fe_2O_3	CaO	MgO	Others	
68.22	19.42	3.45	0.60	0.83	4.84	1520

To card 3/3

15-57-1-731

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1, p 116 (USSR)

AUTHORS: Matveyeva, F. A., Plekhanova, Ye. A.

TITLE: Acid-Resistant Ceramics From Siberian Raw Material (Kislotoupornaya keramika iz sibirskogo syr'ya)

PERIODICAL: Tr. khim-metallurg. in-ta. Zap-Sib. fil. AN SSSR, 1955, Nr 9, pp 3-17.

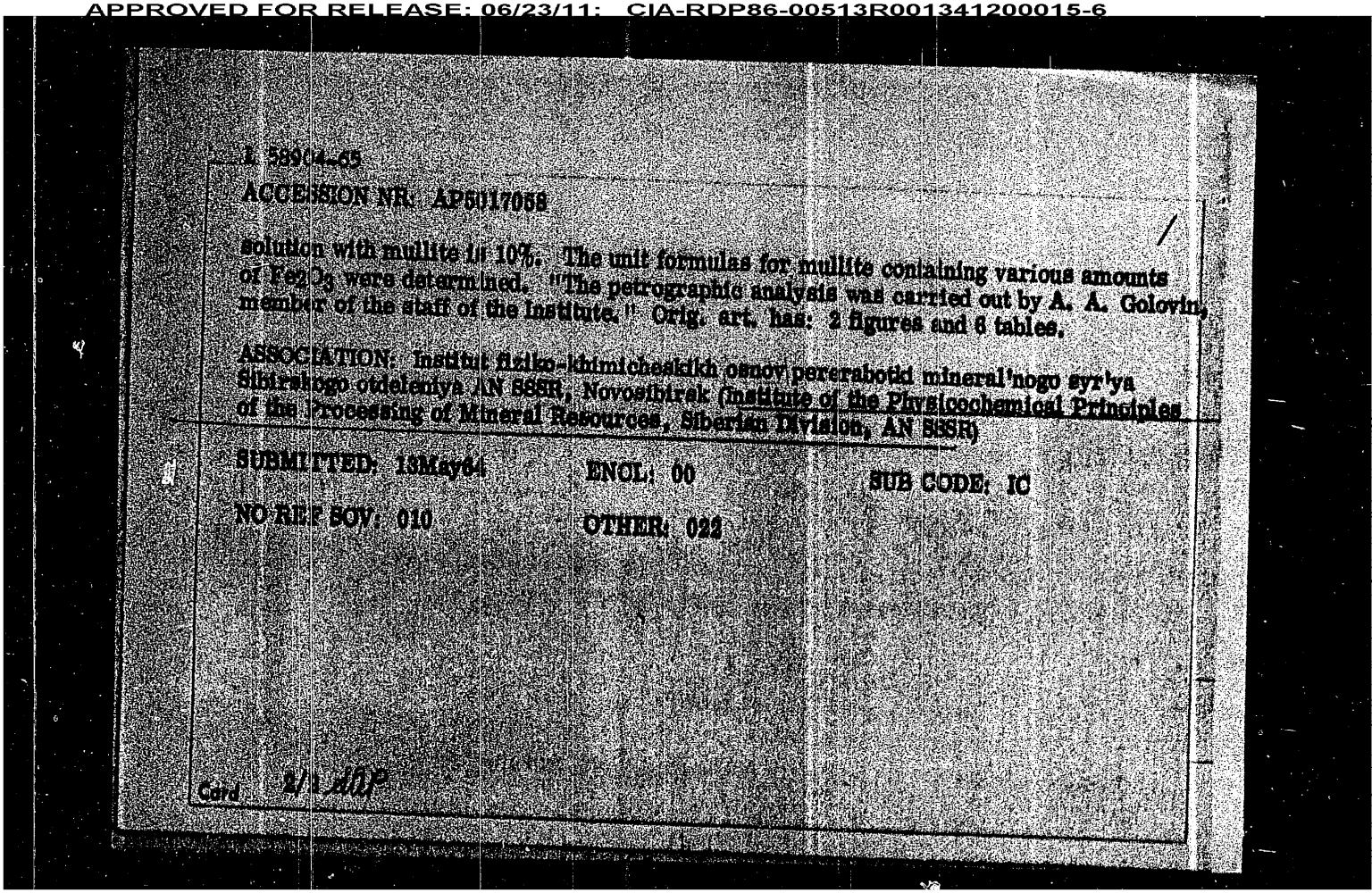
ABSTRACT: Experiments have been conducted to manufacture acid-resistant and earthenware ceramic products from clays of the Yevsinskoye-Dorogino mestorozhdeniye (deposit) in the Novosibirskaya Oblast. The variegated, light-colored clays from the Dorogino part of the deposit were used. The chief properties of these clays are given in the Table (in percent). The yield strength during shearing of air dried material is 3.6 kg/cm^2. Caking occures at 1150° to 1200°. To obtain a ceramic body with high density, acid-resistance, thermal stability, and mechanical strength, it is necessary to

Card 1/3

MATVEYEVA, F.A., kand. tekhn. nauk, otv. red.; MELEKHOVA, T.F., nauchn. sotr., zam. otv. red.; KVYATKOVSKAYA, K.K., kand. tekhn. nauk, red.; KOSHLYAK, L.L., kand. tekhn. nauk, red.; PLEKHANOVA, Ye.A., nauchn. sotr., red.; SHITSARENKO, A.A., red.

[Prospects of the development of the ceramic industries of Siberia and of the Far East; materials] Perspektivy razvitiia keramicheskoi promyshlennosti Sibiri i Dal'nego Vostoka; materialy. Novosibirsk, Red.-izd. otdel Sibirskogo otd-niia AN SSSR, 1964. 183 p. (MIRA 17:11)

1. Soveshchaniye po khimii i tekhnologii keramiki i perspektivam razvitiya keramicheskoy promyshlennosti Sibiri i Dal'nego Vostoka. Novosibirsk, 1962. 2. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya AN SSSR (for Matveyeva). 3. Gosudarstvennyy nauchno-issledovatel'skiy institut stroitel'noy keramiki (for Kvyatkovskaya, Koshlyak).



L 59904-65

ACCESSION NR: AP5017058

solution with mullite in 10%. The unit formulas for mullite containing various amounts of Fe_2O_3 were determined. "The petrographic analysis was carried out by A. A. Golovin, member of the staff of the Institute." Orig. art. has: 2 figures and 6 tables.

ASSOCIATION: Institut fiziko-khimicheskikh osnov pererabotki mineral'nogo syr'ya Sibirskogo otdeleniya AN SSSR, Novosibirsk (Institute of the Physicochemical Principles of the Processing of Mineral Resources, Siberian Division, AN SSSR)

SUBMITTED: 13May64 ENCL: 00 SUB CODE: IC

NO REF SOV: 010 OTHER: 022

Card 2/3 dd/

L 5894-65 EWP(e)/EWT(m)/EWP(t) WH

ACCESSION NR: AP5017086 UR/0289/65/000/001/0048/0054
541.183.25

AUTHOR: Plekhanova, Ye. A.; Golubova, G. A.; Zyuzin, N. I.

TITLE: The mullite -- ferric oxide solid solution

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 1, 1965, 48-54

TOPIC TAGS: mullite, ferric oxide, kaolinite, solid solution, petrographic analysis, lattice constant

ABSTRACT: The study was made in order to determine the nature of the incorporation of ferric oxide into the structure of mullite, and to find the limiting concentration of the ferric oxide present in this structure. The samples were prepared by sintering mixtures of kaolinite and Fe_2O_3 at 1300C. Petrographic analysis showed that as the Fe_2O_3 content rose, the refractive index increased, indicating the incorporation of Fe_2O_3 in the lattice of mullite. Infrared spectra showed an isomorphous substitution of Fe^{3+} for Al^{3+} at octahedral positions and the formation of solid solutions of mullite with Fe_2O_3. X-ray diffraction was used for a precise determination of the lattice constants and unit cell volume of mullite; the data show that the limiting Fe_2O_3 concentration in the solid

Card 1/2

SAVINOV, O.A.; LUSKIN, A.Ya.; TSEYTLIN, M.G.; PLEKHANOVA, S.V.; KAPLAN, M.Ya., redaktor; PUL'KINA, Ye.A., tekhnicheskiy redaktor.

[Vibration pile driver with spring-suspended pile cap]Svainye vibropogruzhateli s podressorennoi prigruzkoi. Leningrad, Gos. izd-vo lit-ry po stroit. i arkhit., 1954. 126 p. (MLRA 8:9)
(Pile driving)

PLEKHANOVA, S.V., inzh.

Using vibrators in working frozen ground. Biul. stroi. tekh. 12 no.4:9-10 Ap '55. (MIRA 11:12)
(Frozen ground) (Vibrators)

SOV/79-29-2-66/71

Alkaloids of the Plant Trichodesma Incanum. Structure of Incanine and Trichodesmine

ASSOCIATION: Institut khimii rastitel'nykh veshchestv Akademii nauk Uzbekskoy SSR (Institute for the Chemistry of Vegetable Matter of the Academy of Sciences, Uzbekskaya SSR)

SUBMITTED: January 3, 1958

Card 3/3

Alkaloids of the Plant Trichodesma Incanum. Structure of Incanine and Trichodesmine

alkaloids were separated from the seeds and the upper part of the plant Trichodesma incanum (Bge)DC: incanine ($C_{18}H_{27}O_5N$), the N-oxide of incanine, trichodesmine ($C_{18}H_{27}O_6N$), and the N-oxide of trichodesmine. Depending on the type of saponification of incanine, new geometrical acids are formed: incanine acid and isoincanine acid from the composition $C_{10}H_{16}O_4$ (V). The conversion of the former into the latter and vice versa was put into practice. The reduction of the methyl esters of both acids with $LiAlH_4$ gave trioxy compounds having the composition $C_{10}H_{22}O_3$ (III). Compounds (V) are γ-lactone of 2-oxy-3,5-dimethylhexane-2,4-dicarbonic acid (IV). Incanine (I) has the structure of the cyclic diester of retronecine and of 2-oxy-3,5-dimethylhexane-2,4-dicarbonic acid. The structure of trichodesmine acid (VII), which is a γ-lactonic acid of 2,3-dioxy-3,5-dimethylhexane-2,4-dicarbonic acid (VI), was determined. Trichodesmine is a cyclic diester of retronecine and of 2,3-dioxy-3,5-dimenthylhexane-2,4-dicarbonic acid (II). There are 1 table and 10 references, 8 of which are Soviet.

Card 2/3

AUTHORS: Yunusov, S. Yu. and Plekhanova, N. V. SOV/79-29-2-66/7

TITLE: Alkaloids of the Plant Trichodesma Incanum (Alkaloidy Trichodesma incanum)
Structure of Incanine and Trichodesmine (Stroyeniye inkanina i trikhodesmina)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 677-684 (USSR)

ABSTRACT: Men'shikov, G. P. and Rubinshteyn, M. M. (Ref 1) separated the alkaloid trichodesmine (0.075 %) from the subterranean parts of the above plant. By lengthy extraction with ether and chloroform the authors obtained from its seeds various mixtures consisting of bases (Ref 5). On separating the alkaloid mixture (from ripe seeds) four crystalline bases were separated by making use of their different solubility in ether, benzene and acetone. The first alkaloid was unknown and was given the name of "incanine" (I); the second was the N-oxide form of incanine; the third was found to be trichodesmine (II), and the fourth was the N-oxide form of trichodesmine. Both the quantitative and qualitative composition of the alkaloids in the seeds vary markedly depending on the degree of ripeness, on the place of growth, and as far as the subterranean parts are concerned, on the plant developing stage (Table). Thus the following new

Card 1/3

PLEKHANOVA, M.Ye., inzh.

Organizing communication channels for remote signal systems in rural electrical networks of medium voltage. Trudy MIMESKH 12:183-194 '60. (MIRA 13:9)
(Remote control)

PLEKHANOV, G.F.; VEDYUSHKINA, V.V.

Formation of a vascular endothelial reaction in rat to charges in a high frequency electromagnetic field. Zhur. vys. nerv. deiat. 16 no. 1:34-37 Ja-F '66 (MIRA 19:2)

1. Tomskiy meditsinskiy institut; Institut tsitologii i genetiki Sibirskogo otdeleniya AN SSSR i Institut avtomatiki i elektrometrii Sibirskogo otdeleniya AN SSSR. Submitted August 26, 1964.

PLEKHANOV, V.Ye.

Dissemination of technical progress. Tekst. prom. 16 no.8: 56-57 Ag '56. (MLRA 9:10)

1. Nachal'nik tsekha tkatskikh avtomatov Kostromskogo l'nokombinata imeni Lenina.
(Kostroma--Technical libraries)

PLEKHANOV, V.Ye.

PRAVOTOROVA, N.N.; SHTAL'BERG, P.I.; PLEKHANOV, V.Ye.; BRUT-BRULYAKO, B.N.; OSETROV, I.A.

Loom for flax weaving. Tekst. prom. 17 no.8:28-29 Ag '57.
(Looms) (Flax) (MLRA 10:9)

ACCESSION NR: AP5018371

ENCLOSURE: 01

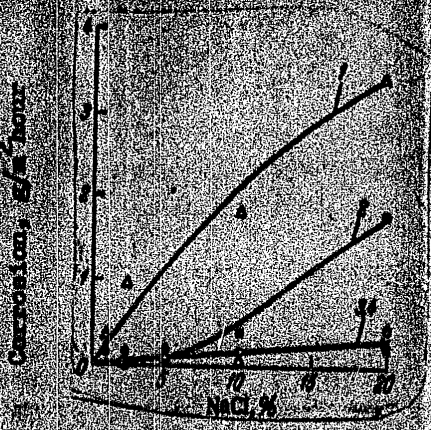


Fig. 1. Dependence of corrosion of steels in 0.2 N HCl on the addition of NaCl at room temperature over a 25 hr period. 1- OKh21N5T; 2- OKh21N6M2T; 3- Kh18N12M3T; 4- 1Kh18N10T

Card 3/4

L 62173-65

ACCESSION NR: AP5018371

0.4 N HCl at room temperature and 0.2 N HCl at 600. Steel II is not suitable for use in 0.2 N HCl containing added chloride ions. Steels I, III, and IV may be used in hydrochloric acid solution containing 3% and 1% of added chloride ions at room temperature and 600 respectively. A. A. Yergakova took part in the experiments. Orig. art. has: 1 table and 4 graphs.

ASSOCIATION: MIOPIK

SUBMITTED: 00 ENCL: 01 SUB CODE: MM, GC

NO REF SOV: 009 OTHER: 005

Card 2/3

L 62473-65 EWT(m)/EPF(c)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) MJW/JD/HW/WB

ACCESSION NR: AP5018371 UR/0064/65/000/007/0527/0530
669.15:620.193.41

AUTHORS: Tsaytlin, Kh. L.; Plekhanova, V. P.

TITLE: Corrosion of stainless steels in dilute hydrochloric acid

SOURCE: Khimicheskaya promyshlennost', no. 7, 1965, 527-530

TOPIC TAGS: corrosion, stainless steel, hydrochloric acid/ 0Kh21N5T steel, 0Kh21N6M2T steel, 1Kh18N10T steel, Kh18N12M3T steel

ABSTRACT: The corrosive behavior of ferrite-austenite steels 0Kh21N5T (I) and 0Kh21N6M2T (II) in dilute hydrochloric acid was studied and compared with that of steels 1Kh18N10T (III) and Kh18N12M3T (IV). The experiments were carried out at room temperature for a period of 3000 hr, and at 60° for a period of 500 hr. The effect of added chlorides on the corrosion behavior was also studied. The effect of sodium chloride is shown graphically in Fig. 1 on the Enclosure. It is concluded that steel I cannot be considered a suitable substitute for steel III. Although steel II does not differ significantly from steel IV as far as its corrosive behavior in hydrochloric acid is concerned, steel IV is to be preferred to steel II in the presence of significant concentrations of chloride ions. Steels III and I may be used in 0.2 N HCl at room temperature, whereas steels IV and II may be used in

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200015-6

TSEYTLIN, Kh.L.; PLEKHANOVA, V.F.

Corrosion of stainless steel in dilute hydrochloric acid. Khim.prom. 41 no.7:527-530 Jl '65. (MIRA 18:8)

1. Nauchno-issledovatel'skiy institut [illegible] i krasiteley.

L 62173-65 EWT(m)/EPF(c)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) MJW/JD/HW/WB

13000
24 4200

25829

S/535/60/000/130/004/007
E081/E335

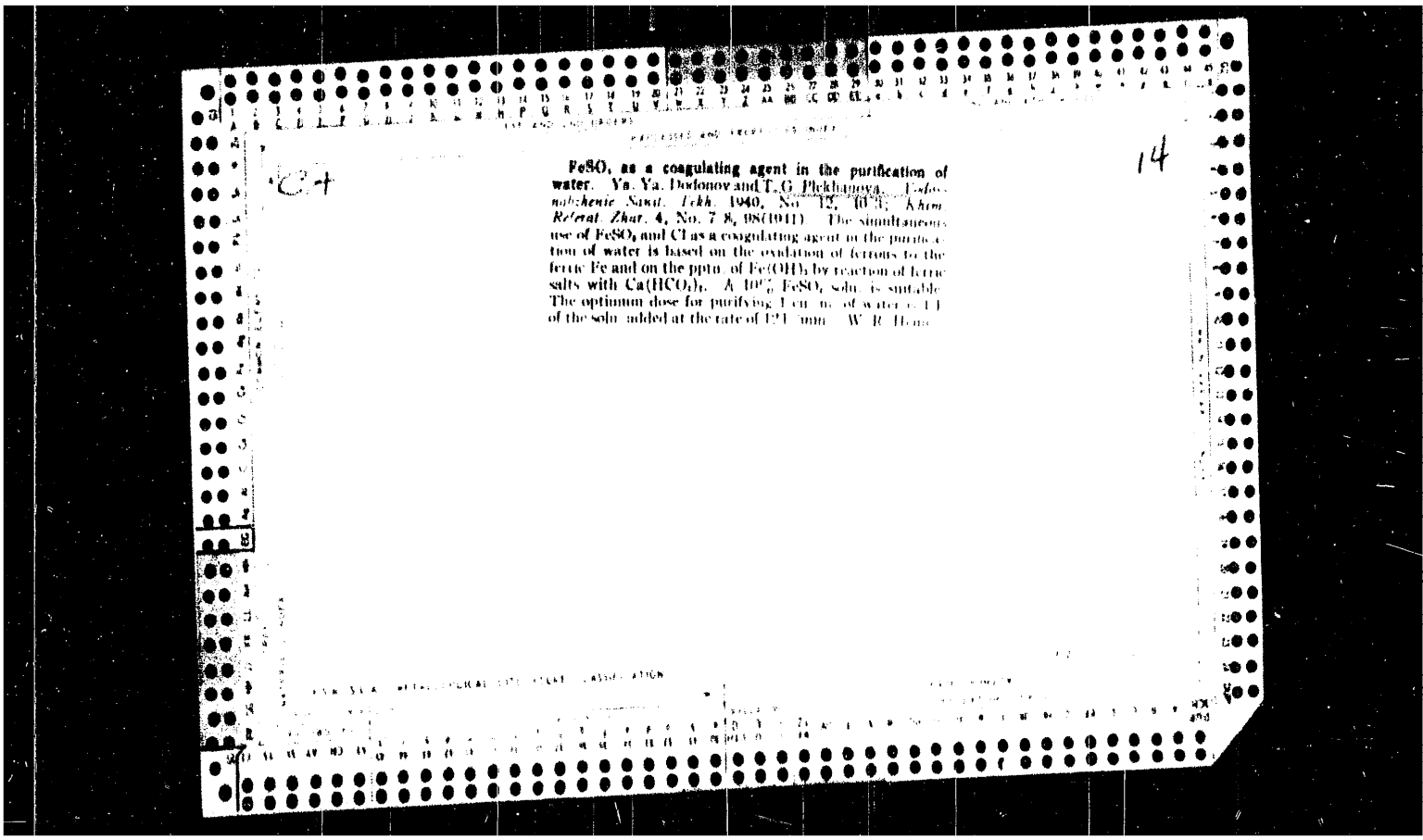
AUTHOR: Plekhanov, V.M., Candidate of Technical Sciences

TITLE: Transverse Bending and Stability of Three-ply Plates

PERIODICAL: Moscow. Aviatsionnyy institut. Trudy. No. 130, 1960. Prochnost' aviatsionnykh konstruktsiy. pp. 87 - 109

TEXT: The paper is part of a dissertation submitted to the Moscow Aviation Institute in 1950 (Ref. 7 - the author, Dissertatsiya, MAI, 1950). The plates considered are of sandwich construction with outer layers of strong material separated by a layer of light and weak filling. The geometrical and equilibrium relations are established in differential form and expressions are given for the bending and twisting moments in the plate. Assuming the edges of a rectangular plate are simply supported, the displacement in the plate are expressed as infinite double trigonometric series and by substituting these series in the basic differential equations, a formula is obtained for the transverse deflection of a plate under the

Card 1/2



$FeSO_4$ as a coagulating agent in the purification of water. Ya. Ya. Dudonov and T. G. Plekhanova. *Trudy Leningradskogo Sanit. Tekh.* 1940, No. 12, 40–3; *Khim. Referat. Zhur.* 4, No. 7–8, 98(1941). The simultaneous use of $FeSO_4$ and Cl as a coagulating agent in the purification of water is based on the oxidation of ferrous to the ferric Fe and on the ppte. of $Fe(OH)_3$ by reaction of ferric salts with $Ca(HCO_3)_2$. A 10% $FeSO_4$ soln. is suitable. The optimum dose for purifying 1 cu. m. of water is 1 l. of the soln. added at the rate of 1 l./min. W. R. Henn

PLEKHANOV, P.S., inzhener.

Research carried on at the Kuznetsk Metallurgical Combine. Stal' 16 no.8: 744-746 Ag '56. (Stalinsk--Metallurgy) (MLRA 9:10)

PLEKHANOV, P.S., inzhener; MIKHAYLETS, N.S., inzhener; GORELKINA, A.Ye., inzhener; NIKULIN, N.G., tekhnik.

Effect of the technology of smelting and pouring boiling staeel on rejects for lamination flaws. Stal' 16 no.5:422-430 My '56. (MLRA 9:8)

1. Kunzetskiy metallurgicheskiy kombinat.
(Smelting) (Steel--Defects)

PERKHUNOV, P.S., kand. tekhn. nauk; RADCHENKO, K.P., kand. tekhn. nauk; VISHNYAKOVA, M.P., inzh.

Heating of rail steel ingots in regenerative pits. Stal' 25 no.8:837-840 S '65. (MIRA 18:9)

1. Kuznetskiy metallurgicheskiy kombinat i Vsesoyuznyy nauchno-issledovatel'skiy trubnyy institut.

Kand.

YUNUSOV, S.Yu., akademik; PLEKHANOVA, N.V.

Alkaloids from Rindera cyclodonta Bge. from the Boraginaceae family. Dokl.AN Uz.SSR no.12:27-30 '58. (MIRA 12:1)

1. Institut khimii rastitel'nykh veshchestv AN UzSSR. 2. AN UzSSR i chlen-korrespondent AN SSSR (for Yunusov).
(Asia, Central--Borage) (Alkaloids)

YUNUSOV, S.Yu., akademik; PLEKHANOVA, N.V.; SHAKIROV, T.

Investigation of several species of Eremurus. Dokl.AN Uz.SSR no.11:25-27 ' 58. (MIRA 11:12)

1. Chlen-korrespondent AN SSSR,AN UzSSR (for Yunusov). 2. Institut khimii rastitel'nykh veshchestv AN UzSSR.
(Lilies) (Alkaloids)

YUNUSOV, S.Yu., akademik; SHAKIROV, T.T.; PLEKHANOVA, N.V.

Alkaloids from Convolvulus subhirsutus Rgl. and Schmae of the family Convolvulaceae. Dok. AN Uz.SSR no.10:17-20 '58. (MIRA 11:12)

1. Institut khimii rastitel'nykh veshchestv AN UzSSR. 2. Chlen-korrespondent AN SSSR i akademik AN UzSSR (for Yunusov).
(Alkaloids) (Bindweed)

Plekhanova, N.V

YUNUSOV, S.Yu., akademik; PLEKHANOVA, N.V.

Study of alkaloids extracted from Sophia griffitii Stock. Dokl. AN Uz. SSR no.8:17-19 '57. (MIRA 11:5)

1.AN UzSSR (for Yunusov). 2.Institut khimii rastitel'nyk veshchestv i khlopka AN UzSSR.
(Alkaloids)

YUNUSOV, S.Yu., akademik; PLEKHANOVA, N.V.

Structure of trichodesmin. Dokl. AN Uz. SSR no.6:19-22 '57.
(MIRA 11:5)

1. Institut khimii rastitel'nykh veshchestv i khlopka AN UzSSR.
2. AN UzSSR (for Yunusov)
(Alkaloids)

Plekhanova, N.V.

YUNUSOV, S.Yu., akademik; PLEKHANOVA, N.V.

Incanine structure. Dokl. AN Uz. SSR no.5:13-16 '57. (MIRA 11:5)

1.Institut khimii rastitel'nykh veshchestv i khlopka AN UzSSR.
2. AN UzSSR (for Yunusov).
(Incanine)

YUNUSOV, S.Yu., akademik; PIEKHANOVA, N.V.

Study of Trichodesema incanum alkaloids. Dokl.AN Uz. SSR no. 4:31-33 '57. (MIRA 11:5)

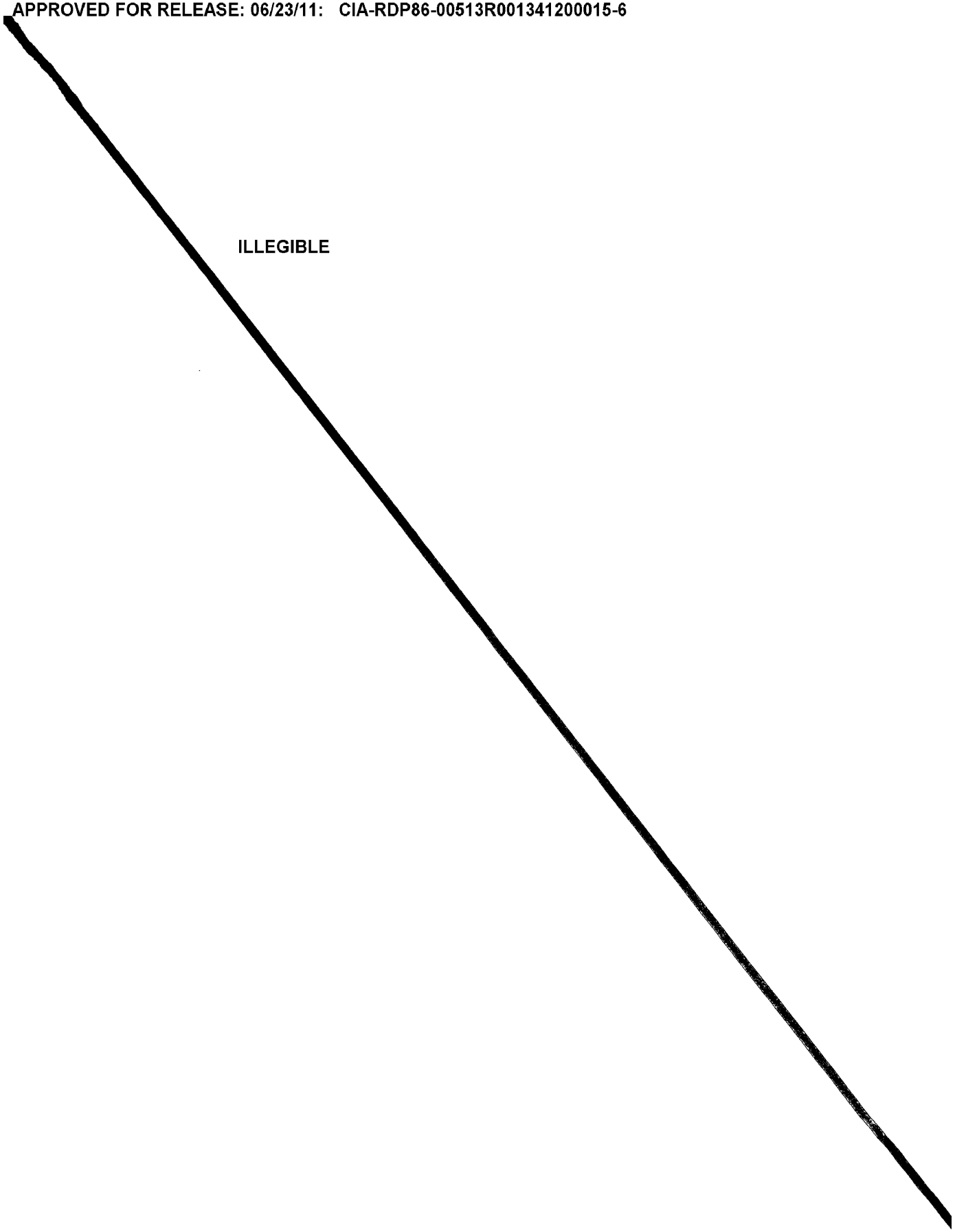
1. Institut khimii rastitel'nykh veshchestv AN UzSSR.
2. AN UzSSR.
(Alkaloids)

PLEKHANOVA, N. V.

PLEKHANOVA, N. V.: "Investigation of the alkaloids of Trichodesma incanum." Published by the Acad Sci Uzbek SSR. Acad Sci Uzbek SSR. Inst of the Chemistry of Plant Raw Materials and Cotton. Tashkent, 1956. (Dissertation for the Degree of Candidate in Chemical Science)

Source: Knizhnaya Letopis' No. 28 1956 Moscow

ILLEGIBLE



ACC NR: AT6024910 (A, N) SOURCE CODE: UR/2951/66/000/004/0085/0106

AUTHOR: Anisimova, N. V.; Archakova, Z. N.; Belyayev, S. Ye.; Danilov, Yu. S.; Kishkina, S. I.; Petrov, Ye. A.; Plekhanova, N. G.; Ponar'ina, T. K.; Radetskaya, Z. M.; Strunin, B. M.

ORG: none

TITLE: Mechanical properties of VAD23 alloy

SOURCE: Alyuminiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy (Heat resistant and high-strength alloys), 85-106

TOPIC TAGS: aluminum alloy, solid mechanical property / VAD23 aluminum alloy

ABSTRACT: Sections and sheets of VAD23 alloy were tested in the artificially aged state (16 hr at 170°C). From the standpoint of creep, stress-rupture strength and recovered strength, the properties of VAD23 are 20-25% higher than those of D16T under long-term performance conditions at 125-150°C. In compression at temperatures up to 150-175°C, the yield points of sheets and sections of VAD23 are 10-20% higher than in extension. From the standpoint of endurance and fatigue strength, VAD23 is not inferior to V95 alloy. VAD23 has a high sensitivity to notching and sharp cracks; sheets of VAD23 alloy display a high sensitivity to notching and cracking as compared to pressed semifinished products. Orig. art. has: 12 figures and 14 tables.

SUB CODE: 11/ SUBM DATE: none / ORIG REF: 003/ OTH REF: 005

Card 1/1 vmb

PLEKHANOVA, N.G.; RATNER, S.I.

Scale effect in plastic materials. Zhur.tekh.fiz. 24 no.3:449-453 Mr '54. (MLRA 7:5)
(Plasticity) (Steel--Testing)

PLEKHANOVA, N. G.

USSR/Physics - Metals, Scale Effect in Testing

FD 366

Card 1/1

Author : Plekhanova, N. G. and Ratner, S. I.

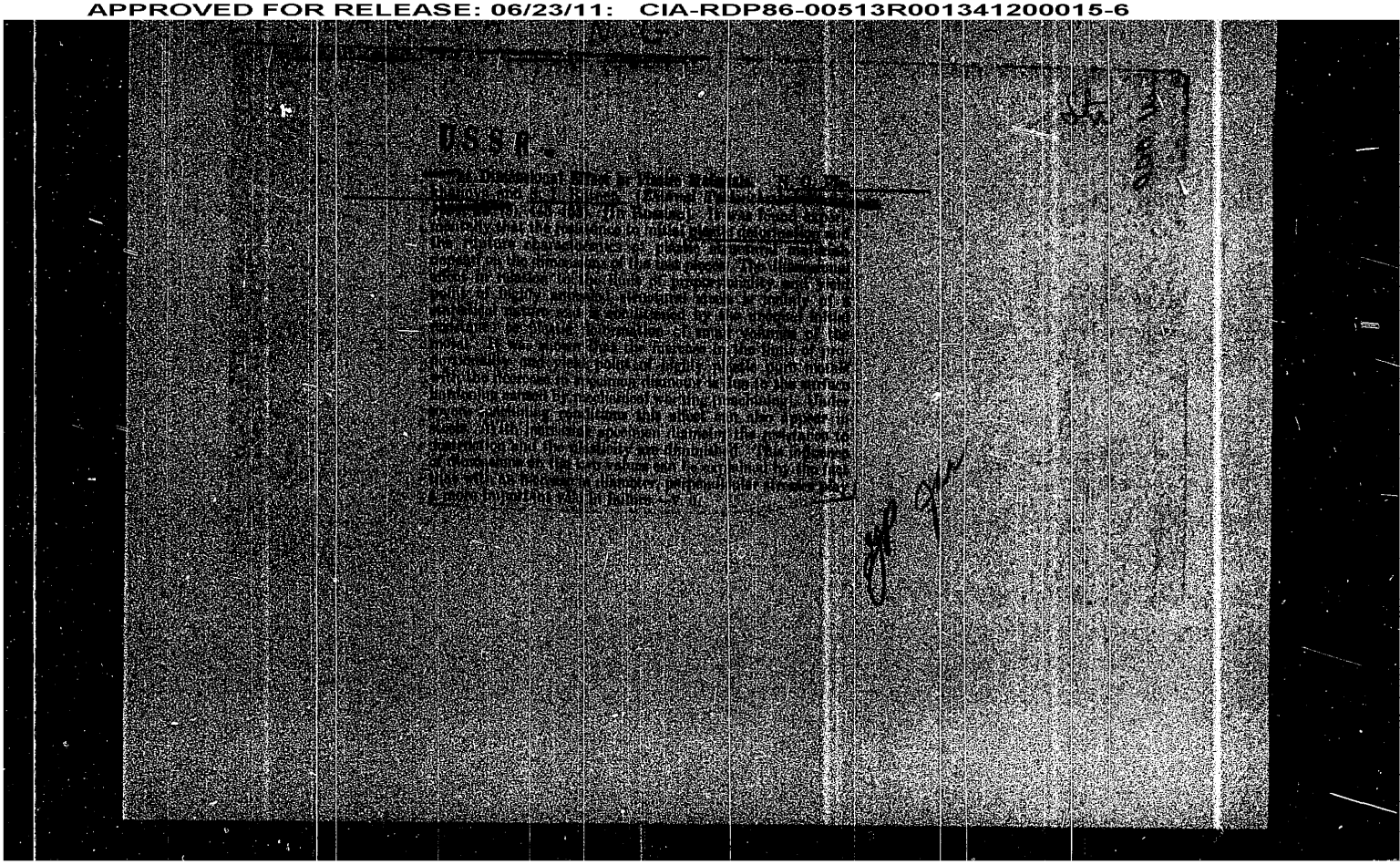
Title : Scale effect in plastic materials

Periodical : Zhur. tekh. fiz. 24, 445-453, Mar 1954

Abstract : Studies the effect of scale factor in test specimens of diameters from 5 to 40 mm. Results of testing for mechanical properties are obtained for copper, aluminum and several grades of steel, mainly in hardened and high-tempered state. Seven references, all USSR, 1936-1950. Tables, graphs.

Institution :

Submitted : August 1, 1953



PLEKHANOVA, M.Ye.; ZHEGALOV, V.K.

Using power distributing networks in oil fields for transmitting communication and remote control signals. Trudy VNII no.35:98-116 '61. (MIRA 15:1)

(Oil fields--Communication systems)
(Remote control)

PLEKHANOVA, M.Ye.

Remote control system in rural electrical networks of medium voltage. Dokl.Akad.sel'khoz. 24 no.12:37-43 '59.
(MIRA 13:4)

1. Moskovskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva. Predstavlena akademikom I.A.Budzko.
(Rural electrification) (Remote control)

PLEKHNOVA, Mariya Il'inichna

Tipizatsiya teknologicheskikh protesessov v usloviyakh individual'nego provizvodstva (Standardization of technological processes under conditions of individual production, by) M. I. Plekhnova i Petr Nikhaylovich Ushkalo. Kiyev, Mashgiz, 1956.
51 p. diagrs., tables.

BANNIKOVA, R.V., kand.med.nauk; PLEKHANOVA, K.A.

Investigating and reducing the incidence of disease with temporary disability among lumber mill workers. Zdrav. Ros. Feder. 4 no. 10:17-20 O '60. (MIRA 13:10)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - kand.med. nauk R.V. Bannikova) Arkhangel'skogo meditsinskogo instituta i Arkhangel'skoy gorodskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach Ye.I. Kruglova).
(ARCHANGEL PROVINCE--LUMBERMEN--DISEASES AND HYGIENE)

Low substituted fibrous products of the alkylation of cellulose. N. I. Nikitin, A. M. Plekhanova, and [illegible] Rudakova. *J. Applied Chem.* (U.S.S.R.) 20, 1185-[illegible] (1947). Linters or bleached wood pulp were swollen with 3 times their wt. of 17.5% NaOH and kept in a closed vessel at 50° for [illegible] hrs. with MeI (I). As the percentage of I (based on the wt. of cotton) was varied from [illegible] to [illegible], the MeO content increased from 1.31 to [illegible] and the soly. in [illegible]% NaOH, both before and after freezing, increased. All the products swelled only slightly in H_2O, except the most highly substituted, which swelled considerably. Similar results were obtained with bleached wood pulp. Alkylation of linters with EtBr [illegible] was considerably less efficient than with I. In alkylating linters with $PhCH_2Cl$ (II) [illegible] NaOH, [illegible] hrs., [illegible]) about [illegible]% II is needed for sufficient substitution to insure dispersibility in aq. NaOH. Slight pretreatment of mercerized cellulose with I facilitates alkylation with II and gives more easily dispersible products. Quant. data show that the hydrolysis of cellulose (as measured by reducing-sugar values) increases in rate with increasing alkylation; at the end of 14 hrs. (10 [illegible] and refluxing in [illegible] H_2SO_4) the percentage of [illegible] for cotton contg. [illegible] [illegible] and [illegible]% MeO, resp. The equil. moisture content [illegible] and [illegible] at [illegible] relative humidities for cotton contg. [illegible] MeO are only slightly higher than for mercerized cotton.

J. P. Danehy

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PLEKHANOV, A. I.

Sovetskaia armiia - armiia novogo tipa; kratkii rekomend. ukazatel' literatury
/The Soviet army is a new type of army; brief bibliography of recommended
books/. Moskva, Gos. ordena Lenina b-ka [illegible], 1952. [illegible] l.

SO: Monthly List of Russian Accessions, Vol. 7 No. 2 May 1954.

MOROZOV, S.M., dotsent, kandidat tekhnicheskikh nauk; PELER, L.V., dotsent, kandidat tekhnicheskikh nauk; PLEKHANOVA, A.A., inzhener.

Defects of welds of rolling stock parts in railroad transportation. Sbor. LIIZHT no.146:262-269 '54. (MLRA 8:1)
(Railroads--Rolling stock) (Welding)

PLEKHANOVA, A. A.

SPP.
.R[illegible]

DEFEKTY STRUKTUR KOTEL'NYKH [illegible] (BY) S. P. [illegible] I A. A. PLEKHANOVA.
MOSKVA, IZD-VO MINISTERSTVA [illegible] FLOTA SSSR, 1951. 38, (1) p. ILLUS.,
GRAPHS, TABLES. BIBLIOGRAPHY: p. (39)

PLEKHANOV, Yu. S.

6801. Plekhanov, Yu. S. Zemlyaniku--v gornyye rayony tadzhikistana. Stalinabad. Izd-vo Akad. nauk Tadzhik. SSR. In-t botaniki. Nauch-Popul. B-ka. Vyp. 25). 1.000 ekz. 40 k.- (55-2293) P 634.75 (584.5)

SO: Knizhnaya Letopis' No. 6, 1955

PLEKHANOV, Yu. S.

USSR/Cultivated Plants - Fruits and Berries. M-5

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10949

Author : Plekhanov, Yu.S.

Inst : Botanical Institute of the Academy of Sciences Tadzhik SSR

Title : Wild Fruits and Their Uses.

Orig Pub : Sad i ogorod, 1956, No 11, 54-56

Abstract : A short description is given of the work of the Varzob Mountain Botanical Station of the Botanical Institute of the Academy of Sciences TadzhikSSR on the utilization of wild fruit trees as rootstocks in planting gardens on mountain slopes, often on unirrigated lands. Those with the best prospects for the future are: apple, pear, plum (Prunus devaricata), Bokhara almond, and dwarf and magaleb cherry.

Card 1/1

PLEKHANOV, V.Ye.

Practices of assistant foreman Dobrynin's brigade. Tekst.prom. 16 no.7:54-55 Jl '56. (MLRA 9:8)

1. Nachal'nik tsekha Kostromskogo l'nokombinata imeni Lenina. (Kostroma--Linen)

[illegible], V. I. Cand Tech Sci

Dissertation: "Calculation [illegible] of Skin with Filler for Transverse [illegible] and Stability."

22/5/50

Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze.

SO Vecheryaya Moskva
Sum 71

PLEKHANOV, V.M., kand.tekhn.nauk

Transverse bending and stability of sandwich plates. Trudy MAI no.130:87-109 '60. (MIRA 14:5)
(Elastic plates and shells)

137-1957-12-24217

The Stabilization of Welding Current

section both produces and controls the impulse which ignites the I. A trigger cascade stabilizes the current in the automatic regulator section.

A. N.

1. Ignitrons-Applications
2. Electric currents-Stabilization
3. Welding-Equipment

Card 2/2

Plekhanov, V.M.

137-1957-12-24237

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 191 (USSR)

AUTHORS: Stakhovskiy, S. S., Plekhanov, V. M.

TITLE: The Stabilization of Welding Current (Stabilizatsiya svarochnogo toka)

PERIODICAL: Tr. Gos. Tsentr. n.-i. in-ta tekhnol. i organiz. proiz-va M-va radiotekhn. prom-sti SSSR. 1956, Nr 3, pp 72-101

ABSTRACT: An examination of the problem of stabilizing the welding current in heavy-duty spot-weld apparatus during voltage fluctuations in the power network. The stabilization is accomplished by means of changing the ignition angle of the ignitrons (I). It is shown theoretically that the ignition angle of I is practically a linear function of the voltage variation in the power network within ± 20 percent. It is pointed out that the design of the RAST-type regulator for welding current deserves the most serious attention. A diagram of a new I breaker, which incorporates a circuit for the stabilization of the welding current is given. The power-supply section and the sensing and actuating circuits utilize the principles of the corresponding circuit sections of the I-breaker PIT-50. The breaker includes a time relay section. The automatic regulator

Card 1/2

PLEKHANOV, S.M.

Mechanization of bottom clearing operations in the Kama Basin.
Rech.transp. 18 no.9:49-50 S '59. (MIRA 13:2)

1. Inzhener sluzhby puti Kamskogo basseynovogo upravleniya puti.
(Kama Valley--Cranes, derricks, etc.)
(Rivers--Regulation)

PLEKHANOV, P.S.; GOLOVANENKO, S.A.; KOBYZEV, V.K.; BULAT, S.I.; MIL'TO, Yu.R.; RYAZANOV, D.G.; BARANOVSKAYA, M.I.

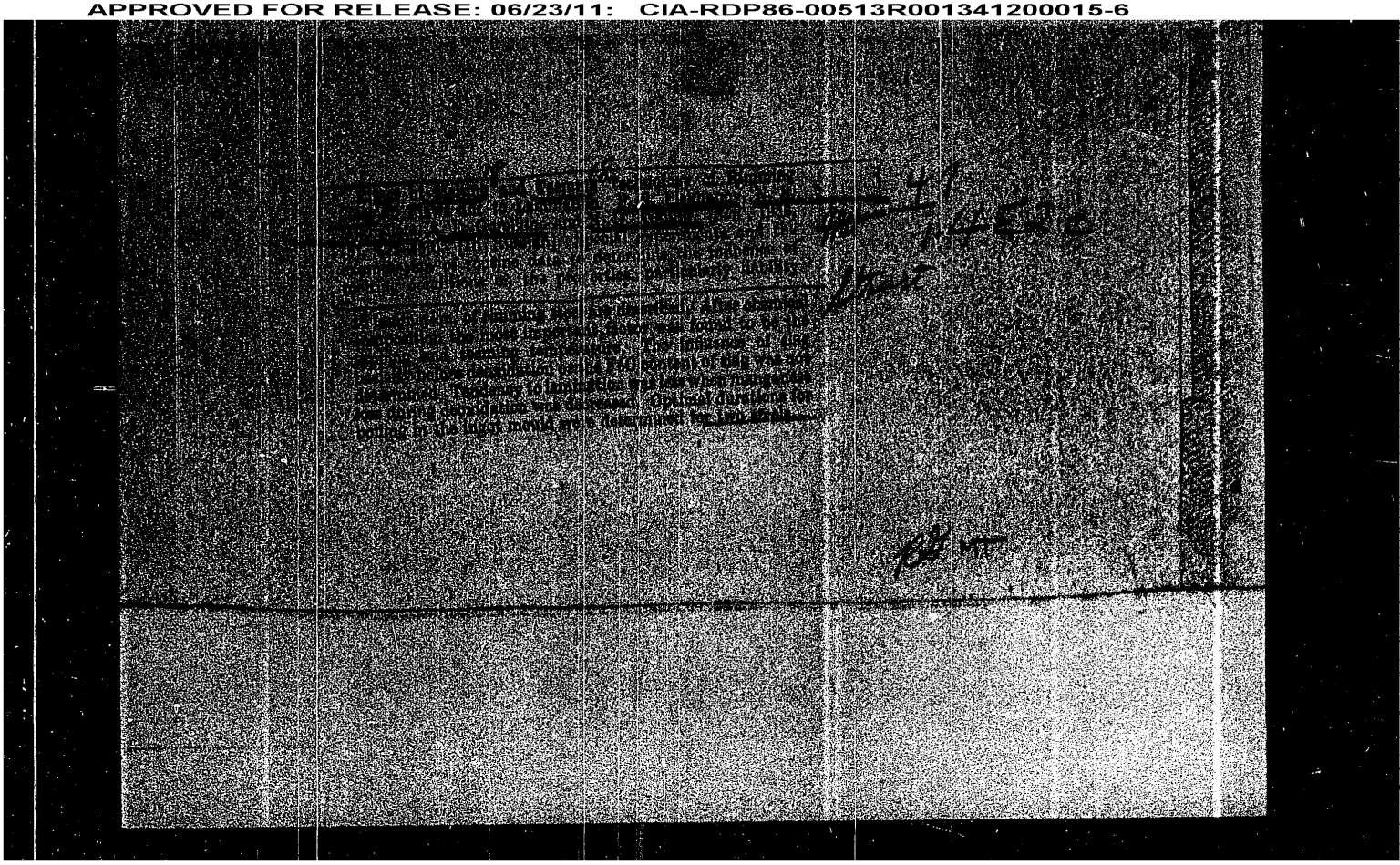
Mastering the rolling of bimetal shapes for the agricultural machinery industry. Stal' 25 no.10:922-927 O '65.
(MIRA 18:11)

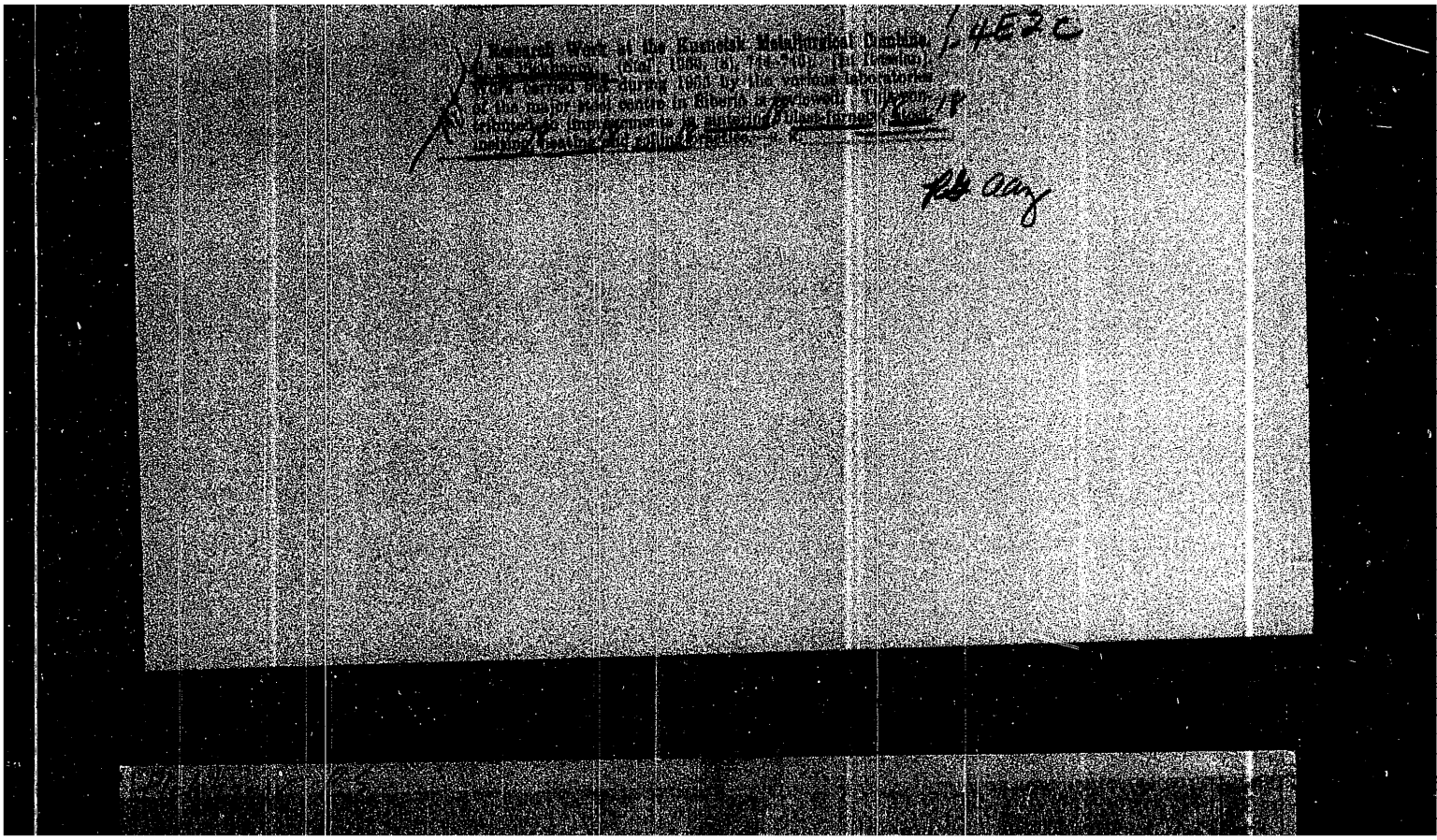
1. Kuznetskiy metallurgicheskiy kombinat i TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I.P. Bardina.

PLEKHANOV, P.S.

Rolling rails of high-purity open-hearth steel, treated with synthetic slag. Stal' 24 no.2:168-170 F '64. (MIRA 17:3)

1. Kuznetskiy metallurgicheskiy kombinat.





18(0) PHASE I BOOK EXPLOITATION

Akademiya nauk SSSR. Institut metallurgii

Sovremennyye problemy metallurgii (Modern Problems in ɱ Moscow, Izd-vo AN SSSR, 1958. 640 p. 3,000 copies

Resp. Ed.: A.M. Samarin, Corresponding Member, USSR Aca Sciences; Eds. of Publishing House: V.S. Rzhevnikov A.N. Dernov; Tech. Ed.: T.V. Polyakova.

PURPOSE: This book is intended for scientific and tech sonnel in the field of metallurgy.

COVERAGE: This is a collection of articles on certain Soviet metallurgy. The book is dedicated to Academi Ivan Pavlovich Bardin on the occasion of his 75th bi book is divided into seven parts. The first part co two articles presenting a brief account of the biogr professional activity of the Soviet metallurgist. I article by John Chipman, Nicholas Grant, and John El USA) describing their meeting with Bardin in Moscow visit to the United States. The second part consists articles and deals with raw materials and fuels for t metallurgical industry. The third part represents th portion of the book. It consists of 25 articles deal the various aspects of the metallurgy of pig iron and The fourth part consists of two articles treating the lurgy of nonferrous metals. The fifth part consists articles on the forming of metals. The sixth part co eight articles discussing certain aspects of physical lurgy. The last part deals with general problems in of metallurgy. References are given after each artic personalities are mentioned.

TABLE OF CONTENTS:

Modern Problems in Metallurgy SOV

Kornilov, I.I. [Doctor of Chemical Sciences, Metallurgi Institute imeni A.A. Baykov, AS USSR]. Chemistry of Titanium

Starodubov, K.F. [Academician], and Yu.Z. Borkovskiy [En gineer, Institute of Ferrous Metallurgy, AS USSR]. I creasing the Strength and Toughness of Low Carbon St by Heat Treatment

Pinkhusovich, L.L., and Z.G. Fridman. Investigating Fa Strength of Rails Containing Arsenic

Plekhanov, P.S., L.Ya. Kravchenko, and V.A. Koshkin [Me lurgical Forging Kombinat]. Increasing the Strength Wear Resistance of Railroad Rails by Oil Quenching

Card

GENERAL PROBLEMS IN METALLURGY

Kostenetskiy, K.F. [Candidate of Technical Sciences, Gi (State Institute for the Design and Planning of Meta Plants)]. General Plans of Metallurgical Plants

AVAILABLE: Library of Congress

Card 12/12 GO/ad 6-19-59

PLEKHANOV, P.S.

7 4E2C

The Central Works Laboratory.

roller-bearings was studied and it was possible to reduce the rate of scrap production to 1/5. Low carbon dynamo steel is now being smelted in the big Martin furnace. The smelting of non-corrosive and acid-resistive steel in electric furnaces was investigated and improved. The portion of scarp in the fused mass with chromium contents was utilized with a rate of 75 %.

The group of laboratory workers concerned with heat technique introduced the accelerated process of heating the ingots in the pits, which was carried out by heating the pits with coke gas and improving this process. Heating processes for semifinished products in heating furnaces of the "500" milling train employing additional air supply in the burner were developed, which increased the efficiency of the furnaces by 10 - 15 %. The furnacees of the profile milling train were redesigned and an output increase of 25 - 30 % was attained by this means. A milling scheme for rectangular ingots on the "1200" milling train led to the saving of 4 passes and increased efficiency by 6 - 7 %. A new type of steel mark for swages was developed in the department for rail joints. The life of the swage was increased by a factor of 30.

The production of two-layer milled sheets from round semifinished iron led to a saving of 70 % of expensive acid resistant steel.

AUTHOR: PLEKANOV, P.S., Deputy-Chief of the Central Works Labor- PA - 2769
atory.

TITLE: The Central Works Laboratory. (Tsentralnaya zavodskaya laboratoriya, Russian)

PERIODICAL: Metallurg, 1957, Vol 2, Nr 4, pp 31 - 33 (U.S.S.R.)
Received: 5 / 1957 Reviewed: 6 / 1957

ABSTRACT: The Central Works Laboratory performs two functions:
1) Control analysis of raw materials, semifinished products and finished products.
2) Research on the development and improvement of operation procedures in all fields of metallurgy.

From experiments on the utilization of non-magnetic ores it was learnt that, on the occasion of the designing of plants for these ores, in addition to magnetic separation, a flotation process must be provided. The group concerned with Martin blast-furnace succeeded in the introduction of smelting processes with arched roofs magnesia chromite bricks, which resulted in an increase of output of 5 - 10% and in a step-up of the durability of the arched roofs to 500 (large furnaces) and 762 (small furnaces) smeltings.

A method of desoxidation (total and partial) of rimmed steels with and admixture of manganese iron was developed and led to a saving of 2,6 kg per ton of steel. The smelting and casting of steel for

Card 1/3

PLEKHANOV, P.S., inzh.; PETUKHOV, B.G., inzh; SAKHAROV, G.A., inzh.

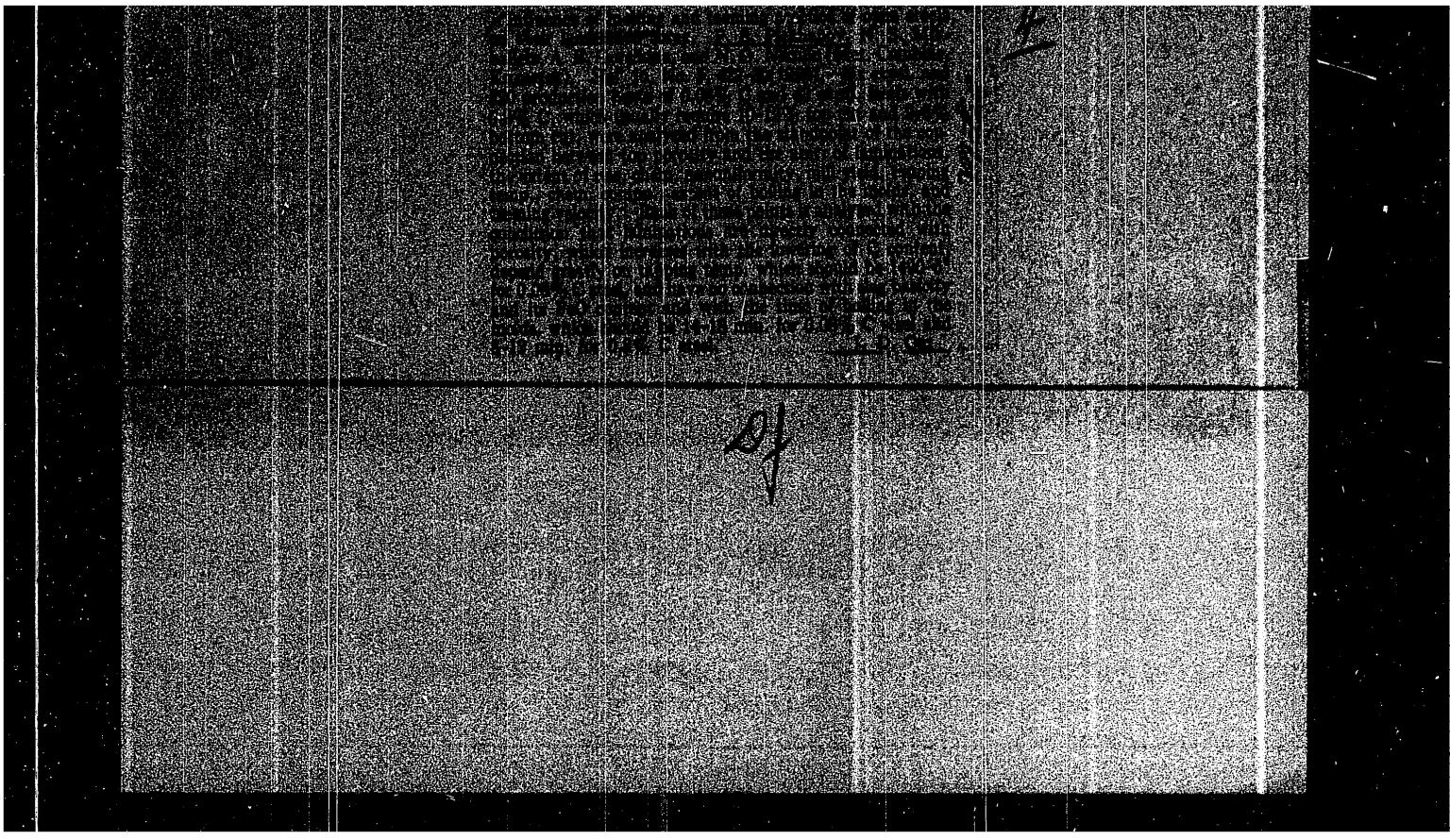
Production of silicon steel plate. Izv.vys.ucheb.zav.; chern.met. no.9:77-85 S '58. (MIRA 11:11)

1. Kuznetskiy metallurgicheskiy kombinat.
(Iron-silicon alloys) (Plates iron and steel)

KOSAR', A.V., red.; VOLOSHIN, A.N., red.; GUREVICH, R.V., red.; KROPACHEV, N.G., red.; PARENCHENKO, N.S., red.; PLEKHANOV, P.S., red.; SUSKOV, I.A., red.; SHAROV, G.V., red.; OGAREV, A.P., tekhn.red.

[First in Siberian metallurgy] Pervenets Sibirskoi metallurgii. Kemerovskoe knizhnoe izd-vo, 1957. 289 p. (MIRA 12:4)

1. Sekretar' partkoma Kuznetskogo kombinata (for Parenchenko).
2. Nachal'nik tekhnicheskogo otdela Kuznetskogo kombinata (for Sharov).
(Kuznetsk Basin--Metallurgical plants)



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200015-6

CHELYSHEV, N.A.; KOBYZEV, V.K.; PLEKHANOV, P.S.; BOGDANOVA, N.G.; YAMPOL'SKIY, A.M.

Investigating metal deformation during the rolling process on the 750 mill by means of radioactive isotopes. Izv. vys. ucheb. zav.; chern. met. no.8:48-58 '60. (MIRA 13:9)

1. Sibirskiy metallurgicheskiy institut.
(Rolling (Metalwork))
(Radioisotopes--Industrial applications)

PLEKHANOV, P.S.

4-160*. The Influence of Technology of Smelting and Casting of Rimmed Steel on the Amount of Lamination Rejects. Vliianie tekhnologii vyplavki i razlivki kipiashchei stali na brak po rasslou. (Russian.) P. S. Plekhanov, V. S. Mikhilev, A. E. Gorelkin, and N. G. Nikitin. Stal', v. 16, no. 5, May 1956, p. [illegible].

The influence of various technological factors on the development of friability in the upper parts of ingots with subsequent lamination is discussed on the basis of several experimental and a large number of industrial smeltings. Suggests optimum conditions of smelting and casting. Tables, graphs, diagram.

PLEKHANOV, P.S., inzhener.

Central industrial laboratory. Metallurg. 2 no.4:31-33 Ap '57. (MLRA 10:5)

1. Zamestitel' nachal'nika TSentral'noy zavodskoy laboratorii Kuznetskogo metallurgicheskogo kombinata.
(Stalinsk--Metallurgical laboratories)

Casting of 7 ton ingots ...

weld together during rolling so that only the open part of the cavity has to be cut off. Altogether five modifications of teeming practice were tested (described in some detail and illustrated). Depending on the teeming practice, the size of the cut off end varied from 3 to 7%. Subsequent testing of the vertical cross-section of an ingot with closed shrinkage cavity for the segregation of carbon, phosphorus and sulphur showed that the degree of segregation was small and did not exceed the degree of segregation encountered in normal ingots. There are 4 figures.

ASSOCIATION: Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat (Siberian Metallurgical Institute and Kuznetsk Metallurgical Combine)

SUBMITTED: May 20, 1961

PLEKHANOV P.S.

39748
S/148/62/000/006/001/C05
E071/E435

11500

AUTHORS: Vishnyakov, A.V., Danilov, P.M., Meteleva, G.G., Borodulin, A.I., Tkachev, I.S., Plekhanov, P.S.

TITLE: Casting of 7 ton ingots of killed steels with closed shrinkage cavity

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.6, 1962, 32-38

TEXT: The possibility of teeming 7 ton ingots with a closed shrinkage cavity which is sufficiently clean as regards non-metallic inclusions and segregations to become welded together on rolling was demonstrated. For insulating the closed shrinkage cavity from air, a skin of 3 to 5 mm thick would be sufficient but for the fact that on reheating the ingot such thin skin can melt and, therefore, the thickness of an insulating layer of 20 to 100 mm is desirable. The principle of the method is to form a bridge in the shrinkage cavity soon after teeming. This bridge will divide the shrinkage cavity into closed and open parts. The closed part will

Card 1/2

PLEKHANOV, P.S., inzh.; KOSHKIN, V.A., inzh.; KRITININ, I.A., inzh.; Prinimali uchastiye: BAZHENOV, M.M.; VAYNSHTEYN, I.L.; POPOV, P.Q.; ZAKHARENKO, N.I.; MANCHEVSKIY, I.V.; GRDINA, Yu.V.; GOVORKOV, A.P.; NESTEROV, N.A.; GRIGORKIN, V.I.

Rolling of high-manganese rails. Stal' 21 no.5:423-425 My '61. (MIRA 14:5)

1. Kuznetskiy metallurgicheskiy kombinat (for Plekhanov, Koshkin, Kritenin, Bazhenov, Vaynshteyn, Popov, Zakharenko, Manchevskiy). 2. Sibirskiy metallurgicheskiy institut (for Grdina, Govorkov, Nesterov, Grigorkin).

(Railroads—Rails) (Rolling (Metalwork))

VOINOV, S.G.; KOSOY, L.F.; SHUMOV, M.M.; SHALIMOV, A.G.; CHEKHOMOV, O.M.; ANDREYEV, T.B.; AFANAS'YEV, S.G.; KALINNIKOV, Ye.S.; Prinimali uchastiye: KORNEYENKOV, A.N.; GURSKIY, G.V.; BOKSHITSKIY, Ya.M.; PETROV, A.K.; MOKHIR, Ye.D.; KOLYASNIKOVA, R.I.; KHASIN, G.A.; DANILIN, V.P.; PLEKHANOV, P.S.; MAZUN, A.I.; MARKIN, A.A.

Refining converter steel in the ladle with liquid synthetic slag. Stal' 22 no.3:226-232 Mr '62. (MIRA 15:3)
(Steel--Metallurgy)

PLEKHANOV, P.S.

Central plant laboratory. Metallurg 7 no.4:32 Ap '62.
(MIRA 15:3)

1. Zamestitel' nachal'nika Tsentral'noy zavodskoy laboratorii Kuznetskogo metallurgicheskogo kombinata.
(Metallurgical laboratories)

At the Kuznetskiy metallurgicheskiy kombinat...

By these measures the sulfide index was lowered from 1.89 to 1.02 and that for oxides from 2.01 to 1.72. 3) Tests were carried out in co-operation with the Institut elektrosvarki im. Patona (Electric Welding Institute im. Paton) and the Barnaul'skiy kotel'nyy zavod (Barnaul Boiler Plant) to produce double-layer steel plates, 150 - 200 mm thick. It was possible to produce multi-layer sheets of any required thickness by electro-slag welding. A reliable bond between the layers over the entire length of the sheet was obtained by fusing the surfaces being welded. The technology consists of a) casting ingots of the required weight and eliminating their conicity by rolling; b) planing one of the broad sides of the ingot to remove surface defects; c) welding 1Kh18N9T (1Kh18N9T) steel sheets to the planed surface of the bloom by the electro-slag method; d) rolling the welded blanks into double-layer sheets. The greatest strength of the welding seam was obtained with Cв.08A (Sv.08A) steel electrodes. A У-18 (U-18) device is being designed for welding the double-layer blooms with sheet-type electrodes.

Card 3/3

At the Kuznetskiy metallurgicheskiy kombinat...

in the metal. The lowest amount of oxide inclusions was observed at a metal viscosity corresponding to 2 - 7 cm of the scale of the viscosimeter with a channel cross section of 81 mm^2. At such a degree of viscosity the amount of stable inclusions (determined electrolytically) was also lowest. By increasing the SiO_2-content of the slag the sulfide and oxide content decreased; calcium oxide reduced the content of semi-brittle silicate and globular inclusions; aluminum oxide lowered the sulfide content but increased the oxide content; an increasing MgO-content in the slag raised the amount of semi-brittle inclusions in the steel. With decreasing slag viscosity the SiO_2-content of the non-metallic inclusions increased, whereas the aluminum oxide content rose until the optimum fluidity (2 - 7 graduations on the viscosimeter) was attained, then it dropped again. The minimum amount of FeO in non-metallic inclusions coincided with the optimum slag fluidity. The higher the content of stable nonmetallic inclusions (FeO, MnO) the greater the oxide content. The more the fluidity of the slag is kept under control, the better the metal reduction (using crushed electrode-waste and coke), the cleaner the ball-bearing steel will be (oxide index 1.35 instead of 1.59). Tests were carried out to reduce the amount of sulfide inclusions in silicium-manganese ball-bearing steel, by remelting wastes of the steel. To decrease the oxide content, the metal was subjected to precipitation reduction with aluminum prior to alloying with silicium.

1230

28947 S/133/61/000/010/010/010
A054/A127

AUTHORS: Plekhanov, P. S., Nikulinskiy, I. D., Engineers

TITLE: At the Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

PERIODICAL: Stal', no.10, 1961, 949

TEXT: 1) Tests were carried out to simplify the production methods and lower the production costs of KT-1 (KT-1) carbon steel used for piano strings. For this purpose the metal was processed in an arc-furnace and tapped with fluor-lime-alumina slag. The new KT-2 grade steel does not differ from the KT-1 type as to grain size, while the macrostructure of blanks from this steel as to central porosity is better than that of KT-1 steel. 2) Ways and means were studied to further reduce the amount of non-metallic inclusions in ball-bearing steel. By introducing coke gas a protective atmosphere is formed around the metal stream from the ladle to the central gate, which reduced the oxide index from 1.98 to 1.71 and for globular inclusions from 0.15 to 0.03, whereas the tendency of the metal to form flakes increased, due to the greater humidity of the gas. An increase in the fluidity of the tapped slag reduced the amount of sulfide impurities and globules

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S/130/62/000/004/002/002
A006/A101

AUTHOR: Plekhanov, P. S., Deputy Chief of TsZL

TITLE: Central Laboratory of the Plant

PERIODICAL: Metallurg, no. 4, 1962, 32

TEXT: General information is given on the activities of the KMK central laboratory, which is equipped with latest models of apparatus and machines. New methods and techniques have been developed at this laboratory, including: endurance tests at 300 and 350°C; toughness tests at -40 and -60°C, and many other test methods; a rapid method of etching transverse templets without polishing the specimen surface, immediately after planing; ultrasonic control of macrostructure; a rapid method of determining the alpha-phase in stainless steels; a method for determining the grain in eutectoid steel; ductility tests by torsion at 800 - 1,200°C. Investigations of the blast furnace process included the automatic distribution of blast over the tuyeres. A technology was developed for the production of high-silicon transformer steel in electric furnaces. The optimum chemical and phase compositions of 1X18H9T (1Kh18N9T) steel were determined, as well as their dependences on the melting technology,

Card 1/2

PLEKHANOV, P.S., inzh.; NIKULINSKIY, I.D., inzh.

Research carried out by the Kuznetsk Metallurgical Combine.
Stal' 21 no.10:882,926,944,949,958 O '61. (MIRA 14:10)
(Blast furnaces) (Steel--Metallurgy) (Metalwork)

S/133/61/000/011/002/010
A054/A127

News in brief...

molds with lined coolers. Shrinkage cavities carefully insulated from the atmosphere and having a non-oxidized surface will weld up at continuous deformation, displaying in the axial part diffused dark spots. The mechanical properties of rails at the places of coalescence of the cavities did not differ from those of other metal zones. The quality of rails cast with the application of coolers was not lower than that of those cast with heating devices. This method made it possible to reduce the head crop to 7 - 8, or even to 4 - 6%. 5) The operation of a floating steel insulator with a suspended ceramic ring was also tested. The use of such insulators makes it possible to cast the ingots without interrupting the metal flow at all or only for short periods. Moreover, a better quality steel was obtained. However, a method has to be developed to manufacture rings of accurate size and high strength, because the manual procedure applied at present is not efficient.

Card 3/3

News in brief...

40 kopecks per ton of steel are saved. 2) In cooperation with TsNIIChM the effect of adding liquid synthetic slag (melted from 55% lime and 45% commercial alumina in an arc-furnace with a bath of carbon blocks) was studied. The ladle was pre-heated, the amount of slag was 5%. The metal was teemed (from a basic open-hearth furnace) into the ladle, without adding any open-hearth slag. After 87 heats it was found a) that the sulfur content of the finished metal decreased to 0.005 - 0.007% irrespective of the sulfur content in the bath prior to tapping; b) that the steel had a higher ductility and strength; c) that in open-hearth ball-bearing steel the nonmetallic inclusions could be reduced. 3) By refining in the ladle rail steel with synthetic lime-alumina slag, 98.9% first-rate product of the P-50 (R-50) grade and 90.4% of the R-65 grade rails were obtained. The sulfur content of the final product was reduced to 0.004% - 0.010%, the amount of stable non-metallic inclusions decreased by a factor of 1.5, the sulfide index from 3.32 to 1.24; the amount of oxides did not change; notch-toughness in transverse specimens increased by 0.3 - 0.8 kg-/cm . 4) In cooperation with SMI, the possibilities of decreasing the head-crop of killed steel ingots were studied. 13 different test castings were made with various mold insulations and molds of different shapes, etc. The best results were obtained when pouring took place in ingot

Card 2/3

S/133/61/000/011/002/010
A054/A127

AUTHORS: Plekhanov, P. S., Nikulinskiy, I. D., Engineers

TITLE: News in brief - at the Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

PERIODICAL: Stal', no. 11, 1961, 998

TEXT: 1) Tests were carried out to investigate the expediency of replacing aluminum by ferro-aluminum in the reduction of steel. In large-capacity open-hearth furnaces 10, 20, 40 and 45 grade rail steels were smelted in two ladles, one with the standard amount of aluminum, the other with ferro-aluminum having an aluminum content of 78% of the standard quantity. The ferro-aluminum was produced by melting aluminum lumps with low-carbon steel (0.15% C, 0.61% Mn, 0.012% P) and contained 0.17% C, 1.08% Mn, 0.86% Si and 0.005% P. Aluminum and ferro-aluminum were put in the ladles by hand 30 - 40 sec after the addition of 45-% ferrosilicon. The steel reduced with ferro-aluminum contained slightly less oxygen and residual aluminum, and fewer nonmetallic inclusions than the standard quality. There is hardly any difference in steel reduced with either of the two agents as to macro-structure, grain size and mechanical properties. When ferro-aluminum is used 15 -

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S/133/61/000/005/005/009
A054/A133

The practice of rolling high-manganese rails

tute)]. There are 2 tables.

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat [Kuznetsk Metallurgical (Integrated) Plant]

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B/133/61/000/005/005/009
A054/A133

AUTHORS: Plekhanov, P.S.; Koshkin, V.A.; Kritinin, I.A.; - Engineers

TITLE: The practice of rolling high-manganese rails

PERIODICAL: Stal', no. 5, 1961, 423 - 425

TEXT: Tests were carried out at the Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine) to produce high-manganese rail steel of the following composition (%): C 0.93; Mn 12.02; Si 0.09; P 0.09; S 0.021; Cr 0.05; Ni 0.13; Cu 0.14. The test ingots, 1.3 and 6 tons in weight, were left to cool in the molds for 4 days and, in order to increase the ductility of the cast steel they were subjected to the following homogenization process: 1) Loading the cold ingots into a furnace at a temperature of 300°C, 4 h 30 min holding; 2) heating from 300 to 700°C in 7 h 40 min, with an average temperature increase of 52°C/h; 3) heating from 700 to 1,050°C in 5 h 50 min, with a temperature increase of 60°C/h; 4) holding at 1,050 - 1,080°C for 48 h and cooling in air in the neighborhood of the furnace. No carbide phase was found after homogenization in the steel structure. Heating the 1.3-ton ingots in a continuous furnace was carried out in the following stages: 1) In the continuous zone (5 h 25 min) at a

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PLEKHANOV, P.S., inzh.

Correcting structural heterogeneity in railroad rails. Stal' 22 no.1:73-74 Ja '62. (MIRA 14:1)

(Railroads--Rails)
(Steel ingots--Defects)

VISHNYAKOV, A.V.; BORODULIN, A.I.; DANILOV, P.M.; METELEVA, G.G.; TKACHEV, I.S.; PLEKHANOV, P.S.

Quality of the fusion of closed shrinkage cavities in killed steel ingots. Stal' 22 no.12:1118-1120 D '62. (MIRA 15:12)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.
(Steel ingots--Defects) (Rolling (Metalwork))

VISHNYAKOV, A.V.; DANILOV, P.M.; METELEVA, G.G.; BORODULIN, A.I.; TKACHEV, I.S.; PLEKHANOV, P.S.

Casting seven-ton ingots of killed steel with closed shrinkage cavities. Izv.vys.ucheb.zav.; chern.met. 5 no.6:32-38 '62. (MIRA 15:7)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.

(Steel ingots)

VISHNYAKOV, A.V.; DANILOV, P.M.; METELEVA, G.G.; BORODULIN, A.I.; TKACHEV, I.S.; PLEKHANOV, P.S.

Fusion of closed shrinkage cavities in killed steel ingots. Izv. vys. ucheb. zav.; chern. met. 5 no.8:44-52 '62. (MIRA 15:9)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.

(Steel ingots--Defects)

PERKHOTOV, P. S.; DANILOV, F. M.

Effect of shaking liquid steel during solidification of the ingot on the quality of the metal in cast and rolled stocks. Izv. vys. ucheb. zav.; chern. met. 7 no.6:68-76 '64. (MIRA 17:7)

1. Kuznetskiy metallurgicheskiy kombinat.

PLEKHANOV, P.S.

Increasing the strength and plasticity of rails of chromium-nickel steel. Stal' 23 no.5:459-460 My '63. (MIRA 16:5)

1. Kuznetskiy metallurgicheskiy kombinat.
(Chromium-nickel steel—Heat treatment)
(Railroads--Rails)

standard and the test heats as to mechanical properties, microstructure, slag-composition and mechanical properties of steel grades 45, P-50 (R-50) and R-65 produced in the conventional way and according to the test method. Metals treated with synthetic slag showed a finer structure in the pearlitic zones. This explains the higher ductility of these heats ($\psi \approx 20\%$). 4) Optimum technological parameters for the pickling of stainless steel sheets by the alkaline method have been developed: temperature, pickling duration, composition of the pickling solution. Investigations of the corrosion resistance of metals for alkaline baths showed that the best results were obtained with СХЛ-2 (SKhL-2), SKhL-4, SKhL-45, 08КП (08kp), Ст 3 (St.3) steels. The application of alkaline pickling improved the sheet surface, prevented overpickling and increased the capacity of pickling baths and reduced the consumption of chemicals.

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S/133/61/000/011/008/010
A054/A127

AUTHORS: Plekhanov, P. S., Nikulinskiy, I. D., Engineers

TITLE: News in brief - At the Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

PERIODICAL: Stal', no. 11, 1961, 1033

TEXT: 1) The structural nonhomogeneity and the distribution of nonmetallic inclusions in the ingot were studied in the test specimens with the aid of P^{32} and S^{35} radioactive isotopes, by deep pickling, ultrasound, chemical, microchemical, petrographic and metallographic analyses. Based on tests with 153 ingots of 12 heats of various compositions (in the cast and rolled state) it was found that at a distance of 20 - 40% from the bottom a zone of structural nonhomogeneity develops. In castings this zone has the shape of a reversed cupola or cup with a wall thickness of 40 mm and in rolled products it has an elongated shape up to 1.5 m in length. In this zone nonmetallic inclusions (mainly aluminum oxide) accumulate, in amount exceeding other inclusions by a factor of 30 - 40. This defect was observed in several steels, containing chromium, chrome-manganese, titanium and carbon, at different temperatures and with various types of molds, pouring systems,

Card 1/3

S/133/61/000/011/008/010
A054/A127

AUTHORS: Plekhanov, P. S., Nikulinskiy, I. D., Engineers

TITLE: News in brief - At the Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

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